

July 31, 2006

Office of Legislative Affairs  
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## **MEMORANDUM FOR THE RECORD**

**Subject:** Hearing before the Senate Commerce, Science and Transportation Committee, Subcommittee on Aviation (Chairman Burns, R-MT) regarding the Joint Planning and Development Office (JPDO) and its role in developing the Next Generation Air Transportation System (NGATS) on July 25, 2006.

**Members Present:** See attached.

**Witnesses:** See attached.

### **Hearing Summary**

On July 25, 2006, the Senate Aviation Subcommittee (Chairman Burns, R-MT) held a hearing on the JPDO. The JPDO is jointly managed by the Federal Aviation Administration (FAA) and NASA and serves as a focal point for coordinating research related to developing the Next Generation Air Transportation System (NGATS). Members were primarily interested in knowing if the JPDO is an effective organization, and asked the panel about the challenges facing the JPDO. The panelists identified the key challenges as: (1) Finding a stable and significant annual funding stream for NGATS -- potentially up to \$1 billion a year until 2025; (2) Establishing stable leadership at JPDO; (3) Finishing the blueprint or "Enterprise Architecture" that will drive the development of NGATS; and (4) Continuing to involve non-government stakeholders in JPDO and the development of NGATS.

Subcommittee Chairman Burns noted that this will be the first of several hearings examining the status and progress of the JPDO in developing NGATS.

### **Summary of Member Opening Remarks**

**Subcommittee Chairman Burns** (R-MT) said he hoped to learn the answer to several key questions during the hearing, including whether JPDO is effectively leveraging expertise from its partners (NASA, the FAA, the Department of Defense, industry representatives etc.) in order to succeed in its mission. He also asked whether NGATS could be developed sooner than 2025, given the pressing need for a modernized and more robust National Airspace System (NAS). He also stressed the need for JPDO to be cognizant that new technologies – not yet available – will have to be incorporated into NGATS as they are developed.

**Full Committee Chairman Stevens** (R-AK) focused his remarks on the current NAS and its impact on Alaska, and stressed the need for a modernized NAS. Right now, 70 percent of Alaskan cities can be reached only by air, year round. Thus a modernized NAS is needed for aviation safety for the general traveling public and for medical evacuation by air. Sen. Stevens commended the FAA for improving the

situation in Alaska via its Capstone and Five Star Medallion programs, but noted that the United States must quickly move forward in developing NGATS.

### **Summary of Opening Remarks from Panelists**

**FAA Administrator Blakey** said the United States has the most effective, efficient and safest airspace system in the world. But now we face a serious problem – demand for air service could triple over the next 20 years. The new NAS, also referred to as the NextGen system, will not be limited to increased airspace capacity. Rather, it must encompass the security, safety and efficiency of passenger, cargo and aircraft operations. Technology will change the way America flies, so the NextGen must utilize new technologies such as enhanced cockpit, navigation and landing capabilities in a more robust way. The JPDO will serve as the focal point for coordination for research related to air transportation for agencies across the federal government. However, in addition, the JPDO must encourage the best minds of the private sector to participate in the NGATS Institute, thus allowing industry stakeholders to get directly involved in the transformation process. Blakey testified about the challenges that lay ahead for the JPDO: (1) First, because the JPDO is not an implementing or executing agency, the FAA and other JPDO partner agencies must work closely with the JPDO to develop an implementation schedule for NGATS. Monthly progress reports will be posted online. A Concept of Operations and the Enterprise Architecture will be essential to defining the next NAS and will guide future investment and capabilities, both in terms of research and systems development. The JPDO has made considerable progress on both products, with the Concept of Operations being released during the week of July 24, 2006. (2) Cost will be a vital factor: We cannot create a NextGen system that is unaffordable, either to U.S. taxpayers or stakeholders. (3) The JPDO must ensure there is one seamless, standardized, international airspace system. The FAA recently signed an agreement with the European Commission, which is developing the counterpart to NGATS – the Single European Sky Air Traffic Management Research program.

**Dr. Porter** said NASA is committed to working with its partners at the JPDO to provide the high-quality, cutting-edge research and technical excellence required to develop the NGATS. NASA's Airspace Systems Program will focus on developing revolutionary concepts, capabilities, and technologies that will enable significant increases in the capacity, efficiency and flexibility of our national airspace system. Future air vehicles will need to address substantial noise, emissions, efficiency, and performance challenges. These are issues that cannot be worked in isolation – a holistic approach to vehicle design will be required in order to address multiple and often conflicting design requirements. Therefore, NASA's Aviation Safety Program will focus on developing cutting-edge tools, methods, and technologies intended to improve the intrinsic safety attributes of aircraft that will be operating in the evolving NGATS. For example, NASA will research ways to improve the inherent resiliency, life-cycle durability, and maintenance of modern aircraft and associated onboard systems. NASA will also pursue flight deck related technologies that will ensure that crew workload and situation awareness are both safely optimized and adapted to the future NGATS operational environment. NASA has interacted closely with the JPDO during the past several months to ensure proper alignment of our research plans with the needs of the NGATS. NASA has solicited input from the JPDO during both its preliminary technical planning last fall and its rigorous review process this past spring. NASA's thorough proposal-review process has ensured that its research plans are technically credible and well-aligned with the NGATS vision.

**Mr. Dillingham** focused his statement on three questions: (1) What is the status of JPDO's efforts to plan for NGATS? (2) What key challenges does JPDO face in moving forward with its planning efforts? and (3) What key challenges does FAA face in transitioning from the current ATC system and in implementing NGATS? Some of those challenges are as follows:

- The JPDO faces leadership, leveraging and commitment challenges as it moves forward with planning NGATS. Two leadership positions critical to JPDO's success are vacant: JPDO has not

had a permanent director for six months, and since the Secretary of Transportation resigned, the senior policy committee has been without a permanent chairperson. Also, JPDO does not have formal, signed agreements with its partner agencies on their respective roles and responsibilities. The JPDO also must convince stakeholders that the Government is fully committed to NGATS.

- **Cost:** Some experts have estimated that it could cost \$1 billion a year from now until 2025 to develop NGATS. Other experts say that is a low-ball estimate. In addition, it is unclear who plans, conducts and pays for the research needed to develop NGATS, from the fundamental level to the demonstration level.
- The FAA faces challenges in institutionalizing recent improvements in its management and acquisition processes, as well as in obtaining the expertise and resources needed to implement NGATS. The FAA may not have the personnel and skills needed to develop NGATS. He suggested using a BRAC-like committee to determine the cost effectiveness of current FAA infrastructure and whether savings could be identified to offset the cost of NGATS.

**Mr. Dobbs** testified that the JPDO has no ability to leverage resources. Seventy percent of the FAA's research budget goes for safety and not aircraft research. How will this formula be adapted to pay for required NGATS research? JPDO has no authority to commit agency resources and it develops no products, just plans. Additionally, which agency – or anyone for that matter – can decide how much NGATS will cost and when it and its pieces will be delivered? Congress needs reliable cost information that the Administration promised to provide last year. JPDO needs to develop an integrated budget document with the Office of Management and Budget (OMB) before it moves forward with anything else. The JPDO also needs to clearly outline what it plans to do differently than the NAS and how it will manage the transition to NGATS. The JPDO needs a clear vision and blueprint for what it wants to accomplish and how it will accomplish those goals. It is essential that the Enterprise Architecture be completed as soon as possible since that document will drive the cost scenarios.

### Summary of Major Questions/Discussions

**Full Committee Chairman Stevens** criticized Mr. Dobbs for trying to force the JPDO to make financial decisions before it was ready to make those decisions, citing the importance of identifying the funding mechanism first and then building the architecture around it to fit that mechanism in order to move forward. **Ranking Member Rockefeller** also said he sensed some hostility from Mr. Dobb's statement. Money will always be a problem; there will never be enough. You need to first decide what you want the most and then obtain that with the stakeholders on board. Mr. Dobbs responded to the Senators, saying he was sorry they had misunderstood his statement. Instead, what Mr. Dobbs said he was trying to emphasize is that OMB can help JPDO identify how other budgets of other agencies can help the FAA pay for NextGen research. The Senate Commerce Committee also can help by leveraging other agency budgets via legislation.

**Full Committee Chairman Stevens** took issue with Mr. Dillingham's suggestion about creating a BRAC-like committee to identify savings in the FAA to help pay for NGATS. He said the United States may need to put additional money into the existing system to allow for it to expand while we wait for NGATS. Developing and implementing systems like Capstone are essential in the meantime. Testing these programs in states like Alaska before a full national launch is essential to ensuring that they work and that industry partners see their value before investing in them nationally. Ms. Blakey agreed, saying new systems that are part of NGATS will be phased in prior to 2025 in order to ensure that the systems are validated before launch nationwide.

**Ranking Member Rockefeller** asked Ms. Blakey how the FAA planned to address the decommissioning of legacy technology. Ms. Blakey said this will be a challenge because many people are wedded to technology that has worked for years. They like ground-based radar, for example, even though the future is in satellite radar. She also said this will be a political challenge as the FAA moves to consolidate and co-locate its facilities. Congressional Members losing these facilities will not be happy about this plan, even though the plan will benefit the Nation as a whole.

**Senator Lott** (R-MS) expressed his concerns about the need for JPDO to produce results. Trying to find ways to save money while developing NGATS is good, but that doesn't negate the fact that the United States needs a robust NGATS. The bottom line is that this is going to cost big bucks. Senator Lott criticized the Administration for its lack of attention to transportation issues as a whole. He said the United States is going to have to invest some of the general budget in NGATS and not just increase user fees. He warned that he would do everything in his power to defeat any attempt to increase taxes or user fees on the flying public. Senator Lott also warned that while \$1 billion a year for NGATS (\$18 billion by 2025) seems like a large investment, it really is not, given that he just voted for a \$220 billion bill for another issue just that day. Everyone needs to agree that we are going to have to put some substantial money into NGATS. Ms. Blakey responded, stressing the importance of having a predictable revenue stream for NGATS.

**Subcommittee Chairman Burns** asked the panelists what they thought were JPDO's top three challenges. While each of the panelists had slightly different answers, their answers fell into four main categories: (1) How to pay for NGATS and keep it on budget; (2) Finishing the Enterprise Architecture; (3) Solving JPDO's leadership problems; and (4) Maintaining stakeholder involvement. Senator Burns also wanted to know whether JPDO has the right people to get the job done. Ms. Blakey said JPDO was on the cusp of selecting a new director and that the NGATS Institute was a robust organization with direct stakeholder involvement.

**Subcommittee Chairman Burns** asked Dr. Porter how NASA fits into the JPDO structure. Dr. Porter said NASA is heavily invested in fundamental avionics research. Future air vehicles also will need to address substantial noise, emissions, efficiency, and performance challenges. Therefore, NASA's Aviation Safety Program will focus on developing cutting-edge tools, methods, and technologies intended to improve the intrinsic safety attributes of aircraft that will be operating in the evolving NGATS. The private sector also will have a role to play in addressing these challenges. Given funding shortfalls in avionics research, Senator Burns wanted to know how NASA plans to accomplish this mission. Dr. Porter responded, saying NASA will focus only on high-priority research that fits into its new core principles for avionics research. She said she is confident NASA will be able to meet this challenge.

*The written statements can be found on the Office of Legislative Affairs website at <http://legislative.nasa.gov>*

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Attachment

**ENCLOSURE****Members Present:**

Conrad Burns, R-MT (*Chair*)

John Rockefeller, D-WV (*Ranking Member*)

Ted Stevens, R-AK (*Full Committee  
Chair*)

Trent Lott, R-MS

Olympia Snowe, R-ME

**Witnesses:**

- **Marion C. Blakey**, Administrator, Federal Aviation Administration;
- **Dr. Lisa Porter**, Associate Administrator for NASA's Aeronautics Research Mission Directorate;
- **Dr. Michael Romanowski**, Vice President for Civil Aviation, Aerospace Industries Association;
- **Gerald Dillingham**, Director, Civil Aviation Issues, General Accountability Office;
- **David Dobbs**, Assistant Inspector General for Aviation, Department of Transportation.